

# SUBJECT INDEX

## A

- Abell-Kendell method
  - and cholesterol screening, 180
- Acetylcholine, 155
  - and aggressive behavior, 149
  - in animals, 150
  - in humans, 152
- Acne, 187-97
  - and bacterial flora, 190-91
  - clinical features, 188-89
  - drugs that can aggravate, 193
  - environmental factors, 193
  - epidemiology, 188
  - and general skin care, 194
  - genetic factors, 189-90
  - hormonal influences, 190
  - microscopic anatomy, 189
  - and patient education, 194
  - and sebum, 191-93
  - systemic therapy for, 195-97
  - topical therapy, 194-95
  - types of, 187-88
- Acquired immune deficiency syndrome (AIDS)
  - AIDS dementia complex (ADC), 160, 162
  - and cell killing by lymphocytes, 51
  - and cytomegalovirus (CMV), 333-34
  - and Epstein-Barr virus (EBV), 335
  - and hematopoietic growth factors (HGFs), 491
  - and herpes simplex viral (HSV) infections, 335
  - and herpesviruses, 331
  - and intestinal malabsorption, 339, 340-41
  - and T lymphocytes, 45
- Actinic injury, 199-208
- Acute glomerulonephritis (AGN)
  - post-streptococcal, 322
- Acute intermittent porphyria (AIP), 460, 461
- Acute rheumatic fever (ARF), 319-27
  - decline in, 319-21
  - and developing nations, 320
  - genetic predisposition to, 327
- and group A streptococci, 321-22, 325, 326, 327
- and military camps, 323-25
- resurgence of, 323-27
- Adenosine receptors
  - and caffeine, 279, 280
- Adenosine triphosphate (ATP)
  - ATP-binding site
    - in insulin receptor, 100, 103
  - and ischemic ventricular arrhythmias, 232, 233, 235-36
  - and myocardial contraction, 71, 72
- Adenovirus serotype 12
  - and celiac sprue, 344
- Advanced glycosylation end products (AGE), 19
- Afterload
  - and congestive heart failure (CHF), 69-71
- Aggressive behavior, 149-55
  - clinical research, 152-55
  - preclinical research, 149, 150-52
- AIDS
  - see Acquired immune deficiency syndrome (AIDS)
- Alcohol
  - and porphyria cutanea tarda, 464
  - and triglyceride levels, 477
- Aldose reductase, 310
- Aldosterone
  - and calcium channel blockers, 295
  - and decreased cardiac output, 67
  - and heart failure, 69-70
  - and the sodium channel, 270-71
- Allograft rejection, 361-71
  - and cytokines, 366, 370
  - and major histocompatibility complex (MHC), 361-66, 367, 368, 370
  - mechanisms of, 366
  - and T cells, 361, 362, 363-66, 367-69, 370
- Amino acid(s)
  - and gluten, 341
  - of parathyroid hormone-like protein (PLP), 36-37
  - and protein digestion, 133, 134, 135, 136-37
  - sequence in insulin receptor, 100-3
  - in thrombospondin, 86-87
  - transport deficiencies, 138
- 5-aminolevulinic acid (ALA) dehydrase, 458-59
  - deficiency, 460, 461
- Amiodarone
  - in hypertrophic cardiomyopathy (HCM) therapy, 75, 81, 82
- Androgen
  - and acne, 190
- Anemia
  - of chronic renal failure, 349-50
  - effect of correcting, 354-56
  - and erythropoietin, 349-58
  - hemolytic
    - and paroxysmal nocturnal hemoglobinuria (PNH), 431
- Angiography
  - digital subtraction, 426
- Angiotensin
  - and decreased cardiac output, 66
  - and diuretics, 68
  - and heart failure, 69-70
- Angiotensin-converting-enzyme (ACE) inhibitors
  - and heart failure, 70-71
- Angiotensin-I (AG-I)
  - and decreased cardiac output, 67
- Angiotensin-II (AG-II)
  - and atrial natriuretic factor (ANF), 380
  - and calcium channel blockers, 295
  - and decreased cardiac output, 67
  - intrarenal, 424
  - and vasoconstriction, 70

- Angiotensinogen  
and decreased cardiac output, 67
- Anorexia  
and AIDS, 340
- Antiarrhythmic agents  
in hypertrophic cardiomyopathy (HCM)  
therapy, 81, 82
- Antibiotics  
for the treatment of acne, 194-96
- Antibodies  
and allograft rejection, 367  
against insulin, 502  
monoclonal, 501  
and graft rejection, 369-71  
and mucus, 395
- Antibody-dependent cytotoxicity (ADCC), 489, 490
- Anticonvulsants  
and human aggressive behavior, 155
- Antigens  
and allograft rejection, 361-66, 367, 368, 370  
and celiac sprue, 342, 343  
major histocompatibility complex (MHC)  
and diabetes, 499-500
- Antiretrovirals  
and human immunodeficiency virus type 1 (HIV-1), 164
- Anxiety  
and caffeine, 283-84  
and serotonin-specific drugs, 437-44
- Aplastic crisis  
and human parvovirus (HPV), 25, 26, 28, 29
- Aprotinin, 56
- Areflexia  
in Guillain-Barré syndrome (GBS), 2  
and the Miller Fisher syndrome, 3
- Arginine vasopressin  
and angiotensin-II, 70  
and cardiac function, 69  
and decreased cardiac output, 66
- L-Arginine vasopressin  
and desmopressin, 55
- Arrhythmia(s)  
atrial fibrillation (AF), 247-48  
atrioventricular (AV) nodal reentry, 245-46  
and caffeine, 283  
ectopic atrial tachycardia, 247  
ischemic ventricular, 231-37  
and probucol, 480
- Wolff-Parkinson-White (WPW), 240-44
- Arterial thrombosis  
and desmopressin, 60-61
- Arthritis  
and human parvovirus (HPV), 25, 26, 30
- Arthropathy  
and human parvovirus (HPV), 29, 39
- Artificial heart valves  
classes and types of, 251-52  
classes of, 259-60  
complications of, 252-53  
structural failure, 253, 260  
and thromboembolism, 253, 254-55, 256  
and thrombosis, 253, 255-56  
and tissue valve failure, 253, 256-59
- Asthma  
and caffeine, 281, 285
- Atelectasis  
and pleural effusions, 10
- Atherogenesis, 476
- Atherosclerosis  
and probucol, 480
- Atherosclerotic disease  
and lipoproteins, 471, 472-73
- ATP  
see Adenosine triphosphate (ATP)
- Atrial fibrillation (AF), 240, 242, 243, 247-48
- Atrial natriuretic factor (ANF), 377-82  
and cirrhosis, 381, 382  
concentration within the circulation, 378-79, 382  
and congestive heart failure, 379-80, 382  
and hypertension, 380-81, 382  
and nephrotic syndrome, 381, 382  
response to exogenous administration of, 379, 381  
therapy for edematous disorders, 381-82
- Atrioventricular (AV) nodal reentry  
surgery for, 245-46
- Atrioventricular (AV) node ablation, 243  
for atrial fibrillation, 247-48
- Autonomic neuropathy, 308-9, 312
- Axon loss  
in Guillain-Barré syndrome (GBS), 4
- Azathioprine  
as therapy in diabetes, 503
- Azotemia, 423, 424, 425, 426, 427
- B**
- B-cell help  
and T cells, 365
- Bacteria  
intestinal barriers to, 393-99
- Bacterial flora  
and acne, 190-91
- Bacterial meningitis  
and child day care centers, 385
- Bacterial overgrowth  
of the small intestine, 339, 344-45
- Baroreceptor reflexes  
and heart failure, 70
- Behavioral pathology  
and human immunodeficiency virus type 1 (HIV-1), 162-63
- Beta-adrenergic blocking agents  
in hypertrophic cardiomyopathy (HCM)  
therapy, 76
- Beta blockers  
in hypertrophic cardiomyopathy (HCM)  
therapy, 80-81
- $\beta$  cells  
and diabetes, 497-505
- $\beta$ -galactosidase activity  
enterocyte enzymes with, 142
- $\beta$ -galactosidases  
bacterial or yeast, 144
- Beta-receptor activity  
and myocardial contraction, 72
- Bile-acid-binding resins  
and hypercholesterolemia  
treatment, 178-79  
for treating hyperlipidemia, 478, 479
- Bile acids  
for gallstone treatment, 405-7
- Bile duct  
malignant obstruction to, 216-20  
Bile duct stones  
endoscopic treatment for, 212-16
- Biliary endoscopy, 211-21
- BioBreeding (BB) rat  
and Type 1 diabetes, 498, 499, 500-1, 502, 504
- Biopsy  
endomyocardial, 66  
intestinal  
and mucosal disease, 144

- lactase activity in, 143
- and mammographic screening, 117, 123, 126-27, 128
- Bleeding**
  - anticoagulant-related and artificial heart valves, 253, 256, 260
  - and desmopressin, 55, 56, 57-59, 62
  - treatment of, 55-56
- Blood clots**
  - and thrombospondin, 87-89
- Blood clotting**
  - and endothelium, 15-23
- Blood loss**
  - surgical and desmopressin, 59-60
- Blood pressure**
  - and coffee consumption, 283
  - and renal function, 423
  - and rHuEpo therapy, 349, 354-56, 358
- Blood supply**
  - and visceral pleural thickness, 8
- Blood vessels**
  - and breast cancer, 118
- Bone**
  - in malignancy and hyperparathyroidism, 39-40
  - and parathyroid hormone (PTH) and parathyroid hormone-like protein (PLP), 36, 37
- Bone marrow failure**
  - and hematopoietic growth factors (HGFs), 483, 490
- Bone marrow suppression**
  - and human parvovirus (HPV), 25, 28, 31
- Bone marrow transplantation**
  - and hematopoietic growth factors (HGFs), 491-92
  - and T lymphocytes, 487-88
- Bone metastases**
  - and hypercalcemia, 41
  - and increased NcAMP and parathyroid hormone-like protein (PLP), 38
- Brain dysfunction**
  - and chronic hypoxemia, 226
- Breast cancer**
  - lead-time bias, 120
  - length bias, 121
  - mammography screening for, 117-29
  - noninvasive and invasive, 118-19
  - selection bias, 121
  - see also Breast carcinoma; Breast tissue; Cancer
- Breast carcinoma**
  - and hypercalcemia, 41
  - and parathyroid hormone-like protein (PLP), 38
  - see also Breast cancer; Breast tissue; Cancer
- Breast tissue**
  - malignant and thrombospondin, 92
  - see also Breast cancer; Breast carcinoma; Cancer
- Breath tests**
  - for small intestine bacterial overgrowth, 345
- Bronchial circulation**
  - and visceral pleural thickness, 8
- Brush border membrane(s)**
  - and bacterial overgrowth, 345
  - and celiac sprue, 342
  - and protein digestion, 135-36, 137, 138
- Butylmethoxydibenzoylmethane**, 207-8
- C**
  - Caffeine, 277-86
    - addiction liability, 285
    - and cardiovascular disease, 282-83
    - cardiovascular effects of, 280-81
    - and the central nervous system, 280
    - consumption of, 277-78
    - dependence upon, 284-85
    - and disease, 281-84
    - endocrine and metabolic effects of, 281
    - gastrointestinal effects of, 281, 282
    - pharmacokinetics and metabolism of, 278-79
    - pharmacology of, 279-81
    - and psychiatric disturbances, 283-84
    - and reproductive disturbances, 283
    - respiratory effects of, 281
    - as a therapeutic agent, 285-86
    - tolerance or adaptation to the effects of, 279-80
    - withdrawal symptoms, 284-85
  - Calcium
    - and cell death, 51
    - cytosolic, 234-35, 236, 290-91, 295
    - and myocardial contraction, 71-72
    - and parathyroid hormone-like protein (PLP), 40
    - and perforin monomer, 48
    - regulation of intake, 144
  - Calcium antagonists
    - in hypertrophic cardiomyopathy (HCM) therapy, 75, 76-81, 82
  - Calcium channel antagonists and ischemic arrhythmias, 236-37
  - Calcium channel blockers and acute renal failure, 295-97, 299
  - and chronic renal failure, 298-99
  - and cytosolic calcium, 290-91, 295
  - effect on normal kidney function, 291-95
  - effect on renal transplantation, 289, 297-98, 299
  - Calcium ions
    - and ventricular arrhythmias, 234-37
  - cAMP
    - and myocardial contraction, 71, 72
    - and phosphodiesterase inhibitors, 73
    - see also Nephrogenous cyclic AMP (NcAMP)
  - cAMP-dependent protein kinase and insulin receptor, 104
  - Cancer
    - and caffeine, 282
    - and hematopoietic growth factors (HGFs), 491-92
    - and porphyrin derivatives, 457, 458, 466-67
    - see also Breast cancer; Breast carcinoma; Breast tissue; Cancer immunotherapies; Skin cancer(s)
  - Cancer immunotherapies and cell killing by lymphocytes, 51
  - see also Cancer
  - Captopril stimulation test, 425
  - Carbon particles injected into breast lesions, 127
  - Carbonic anhydrase inhibitors, 266, 267, 271-72 and the proximal tubule, 266-67
  - and the sodium channel, 270
  - Carboxypeptidases A and B and protein digestion, 135
  - Cardiac surgery and desmopressin, 60, 61, 62
  - Cardiovascular autonomic neuropathy, 308
  - Cardiovascular disease and caffeine, 282-83

- Cardiovascular effects  
of caffeine, 280-81
- Catecholamines, 69
- Catheter(s)  
design and composition of, 171  
implantable, 169, 172-74  
impregnation with antimicrobials, 171-72  
infection, 169-75  
multilumen, 169, 172, 174-75  
silver-impregnated cuffed, 172  
Swan-Ganz, 427  
transtracheal  
and oxygen therapy, 228-29
- Catheter ablation, 240  
of accessory pathway (AP), 244  
for atrial fibrillation (AF), 247  
and atrioventricular (AV) nodal reentry, 246  
for ectopic atrial tachycardia, 247
- Celiac sprue  
and intestinal malabsorption, 339, 341-44
- Cell killing  
perforin and osmotic lysis model for, 46-48  
self-death program of, 50-51
- Cellular function  
and thrombospondin, 89-91
- Central nervous system (CNS)  
and caffeine, 280  
and human immunodeficiency virus type 1, 159-65
- Central venous lines (CVLs), 169-72
- Cerebral lymphomas, 161
- Cerebrospinal fluid (CSF)  
and Guillain-Barré syndrome (GBS), 1, 3-4
- Chenodiol  
and gallstone treatment, 405, 406-7
- Chickenpox  
and child day care centers, 383, 385, 387
- Child day care centers  
infections in, 383-90
- Childhood  
sun exposure during, 207
- Children  
and cholesterol screening, 180  
and drug therapy for hyperlipidemia, 477  
and immunosuppressive agents in diabetes therapy, 503, 504  
insulin autoantibodies in, 502
- Chloride  
and diuretics, 68, 273  
and the loop of Henle, 268-69, 272
- Cholesterol  
and atherosclerotic vascular disease, 472  
biosynthesis, 478, 480  
cholesterol analyzers, 182  
cholesterol gallstones, 401-12  
cholesterol level(s), 181  
and chenodiol, 407  
and coffee consumption, 281, 282-83  
and coronary disease, 472, 473, 476  
definitions of abnormal, 179  
and diet, 477  
increases in serum, 476  
and lipoprotein metabolism, 475  
measurement of, 475  
and triglycerides, 477
- Cholesterol screening, 177-85  
and children, 180  
costs, 184-85  
individual and mass, 183-84  
rationale for, 177-79  
suitable screening test, 180-82, 185
- Cholestyramine  
and coronary disease, 473  
for treating hyperlipidemia, 478, 479
- Chronic obstructive pulmonary disease (COPD)  
and oxygen therapy, 224-26
- Chylomicrons, 474, 475
- Chymotrypsin  
and protein digestion, 135
- Cirrhosis  
and atrial natriuretic factor (ANF), 381, 382  
liver cirrhosis, 55, 59
- Clofibrate  
for treating hyperlipidemia, 479
- Cocaine  
neurology of, 417-21
- Coffee  
and heart disease, 282-83
- Colestipol  
for treating hyperlipidemia, 478, 479
- College of American Pathologists  
Proficiency Testing Survey, 180  
Quality Assurance Program, 180
- Colony-forming cells or units (CFU-GM, CFU-G, CFU-M), 484, 489
- Colony-stimulating factor (CSF)  
production by cells, 487
- Congestive heart failure (CHF)  
see Heart failure, congestive
- Constipation  
and bile-acid-binding resins, 478
- Contraceptive drugs  
and acne, 193, 196
- Contractility  
and congestive heart failure (CHF), 71-73
- Cooperative Study of Renovascular Hypertension, 427
- Coronary disease  
and cholesterol, 179, 472, 473, 476  
and cholesterol screening, 181  
and lipoproteins, 471, 472-74  
and triglycerides, 472-73  
see also Heart disease
- Cosmetics  
and acne, 193
- "Crack" cocaine, 418
- Cranial neuropathy, 309
- Cryoprecipitate  
and uremia, 58, 59
- Cyclic AMP  
see cAMP
- Cyclosporin  
as therapy in diabetes, 503-4  
using lovastatin with, 480
- Cyclosporine (CsA), 48, 369  
and calcium channel blockers, 289, 297-98  
and graft rejection, 362, 370
- Cyst  
and ultrasonography, 125-26
- Cytokine(s), 50  
and allograft rejection, 366, 370  
and endothelium, 15, 17-19, 21, 22  
and hypercalcemia, 35, 38-39, 40, 41  
and sun exposure, 200  
and thrombospondin, 86
- Cytolysis, 47
- Cytomegalovirus (CMV), 161, 332-34, 335  
and child day care centers, 383, 385, 386, 387, 390  
and Guillain-Barré syndrome (GBS), 1-2
- Cytopathology  
and human immunodeficiency virus type 1 (HIV-1), 161-62
- Cytoplasmic granules  
in cell-mediated killing, 47
- Cytosolic  $\beta$ -galactosidase, 142

- Cytotoxic T lymphocytes (CTLs), 45-51
- D**
- Decay-accelerating factor (DAF) and paroxysmal nocturnal hemoglobinuria (PNH), 431-35
- Dehydroepiandrosterone sulfate (DHEA-S) and acne, 190, 196
- Depression and human immunodeficiency virus type 1 (HIV-1), 162-63
- Depressive disorders and serotonin-specific drugs, 437-44
- Dermatoses cell-mediated, 49
- Desmopressin (1-deamino-8-D-arginine vasopressin, DDAVP), 55-62
- Diabetes activation of autoimmunity, 499-500 and genetics, 498-99 insipidus nephrogenic, 61 insulin-dependent diabetes mellitus (IDDM) and diabetic neuropathy, 310 mellitus, 71 and nonobese diabetic (NOD) mice, 49, 498-500, 501, 502, 504 and serum cholesterol, 179 non-insulin-dependent diabetes mellitus (NIDDM), 100, 104, 110 and diabetic neuropathy, 304, 305, 310 prediction of, 501-3, 505 Type 1, 497-505 type II, 479
- Diabetic glomerulopathy and atrial natriuretic factor (ANF), 381
- Diabetic neuropathy, 303-15 clinical presentation and classification, 305-9 diagnosis of, 310-11 diffuse, 305, 306, 309 epidemiology, 304-5 focal, 305, 306, 309 management of clinical syndromes, 311-15 pathogenesis of, 310 pathology of, 309
- Dialysis, 426 and renal artery stenosis (RAS), 428
- Diaphragmatic defect and pleural effusions, 11
- Diarrhea and AIDS, 340
- Diet and acne, 193 and coronary disease, 473 and hyperlipidemia, 471, 477 and hypertriglyceridemia, 476
- Digitalis for patients with congestive heart failure (CHF), 72
- Digoxin and angiotensin-converting enzyme (ACE) inhibitor therapy, 70 for heart failure, 72
- Diltiazem effects and properties of, 290, 291-93, 295, 297, 298 in hypertrophic cardiomyopathy (HCM) therapy, 80
- Disease and caffeine, 281-84 and protein assimilation, 137-38
- Disopyramide in hypertrophic cardiomyopathy (HCM) therapy, 81
- Distal convoluted tubule and diuretics, 266, 269-70, 272
- Distal symmetric polyneuropathy, 304, 305-9 therapy for, 311-15
- Diuretics, 265-73 and angiotensin-converting enzyme (ACE) inhibitor therapy, 70, 71 clinical consequences of, 271-73 and congestive heart failure (CHF), 68 and the distal convoluted tubule, 266, 269-70, 272 and the loop of Henle, 266, 268-69, 272 and the proximal tubule, 266-68, 271 molecular mechanisms of, 266-71
- DNA clones of insulin receptor, 102 damage to and the porphyrins, 463 encoding the insulin receptor, 100, 101, 110 fragmentation, 50 and hematopoietic growth factors (HGFs), 490 probes and diabetogenic major histocompatibility complex (MHC) genes, 498 recombinant human Epo (rHuEpo), 350-58 recombinant methodology and peptide hormones, 449 and sun exposure, 200 UVR-induced damage to, 203 UVR-induced mutations of, 205 UVR-modified, 204 thrombospondin, 86
- Dobutamine and congestive heart failure (CHF), 72-73
- Dopamine, 155 and aggressive behavior, 149 in animals, 150-51 in humans, 153 and cocaine, 418-19 and congestive heart failure (CHF), 72
- Dressings transparent and central venous lines (CVLs), 169, 171
- Drugs and caffeine, 284, 285 photosensitizing, 201 that can aggravate acne, 193 for treating hyperlipidemia, 471, 477-81 for the treatment of acne, 194-97 for the treatment of hypercholesterolemia, 178-79, 185
- Dysbetalipoproteinemia drug treatment for, 479 familial, 476
- Dyserythropoietic anemia, 28
- Dyspnea, 67
- E**
- Echocardiogram and heart failure, 66
- Ectopic atrial tachycardia, 247
- Edematous disorders and atrial natriuretic factor (ANF), 377-82
- Elastase and protein digestion, 135
- Elderly intestinal malabsorption in the, 344, 345-46

- Electrocardiogram  
and heart failure, 66
- Electrocardiography  
and Guillain-Barré syndrome  
(GBS), 3
- Electrolyte excretion  
and calcium channel blockers,  
289, 295
- Electrolytes  
depletion of, 68
- Embryo  
and thrombospondin, 89
- Encephalitis  
human immunodeficiency  
virus type 1 (HIV-1),  
162
- Encephalopathy  
human immunodeficiency  
virus type 1 (HIV-1),  
159, 160-61, 162, 165
- Endocrine effects  
of caffeine, 281
- Endocrine neoplasms, 452-53,  
454
- Endopeptidases  
and protein digestion, 135
- Endoscopic retrograde cholan-  
giopancreatography (ERCP),  
211-21
- Endoscopy  
and biliary tract diseases,  
211-21
- Endothelium, 15-23  
modulation of coagulant prop-  
erties of, 19-22  
modulation of permeability,  
15, 17-19
- Endotoxin, 398
- Enteropathy  
and AIDS, 340, 341  
gluten-sensitive, 341-44
- Enteropeptidase  
and protein digestion, 134-35
- Enzymes)  
enzyme deficiencies  
and pancreatic in-  
sufficiency, 138  
lactase-phlorizin hydrolase  
(LPH), 141-47  
and protein digestion, 133,  
134-36
- Eosinophil CFU (CFU-Eo), 484,  
489
- Epsilon aminocaproic acid, 56
- Epstein-Barr virus (EBV), 334-  
35  
and Guillain-Barré syndrome  
(GBS), 1-2
- Erythema  
and sun exposure, 200-201
- Erythema infectiosum  
and human parvovirus (HPV),  
25, 26, 28-29, 31
- Erythroid burst-forming units  
(BFU-E), 484, 489
- Erythropoiesis  
and human parvovirus (HPV),  
28, 29
- Erythropoietic porphyria, 458,  
460, 461
- Erythropoietin, 484, 485, 486,  
489, 492  
and anemia of chronic renal  
failure, 349-58
- Estrogens  
and acne treatment, 196  
and porphyria cutanea tarda,  
464
- Exercise hypoxemia, 223, 227-  
28
- Exercise tolerance  
and congestive heart failure  
(CHF), 69  
and digoxin therapy, 72  
and hypertrophic car-  
diomyopathy (HCM), 75,  
76, 81, 82  
and oxygen therapy, 227
- Exopeptidases  
and protein digestion, 135
- Extracorporeal shockwave litho-  
tripsy (ESL)  
and bile duct stones, 212  
and gallstone treatment, 401,  
402, 403, 405, 407-8,  
410  
see also Lithotripsy
- F
- Factor Va  
and protein C, 20
- Factor VII/VIIIa  
and tissue factor, 21
- Factor VIII  
and desmopressin, 55, 56,  
57-58, 61  
and endothelium, 22  
in liver cirrhosis, 59
- Factor VIIIa  
and protein C, 20
- Factor IX  
and endothelium, 22  
and tissue factor, 21
- Factor IXa  
and endothelium, 22
- Factor X  
and endothelium, 22  
and tissue factor, 21
- Fat(s)  
and hypercholesterolemia  
treatment, 178  
saturated, 473, 477
- Fatty acids  
free  
and acne, 193, 195  
sebaceous, 192
- Fecal pH  
and lactose malabsorption,  
143
- Femoral neuropathy, 309
- Fetopathy  
and human parvovirus (HPV),  
29
- Fibric acid  
and hypercholesterolemia  
treatment, 178-79
- Fibrin  
and thrombospondin, 85, 87-  
89
- Fibrinogen  
and thrombospondin, 87, 88
- Fine needle aspiration (FNA)  
cytology, 126  
and mammographic abnormal-  
ity, 125
- Foot ulceration  
and diabetic neuropathy, 304,  
306, 308
- Forgetfulness  
and human immunodeficiency  
virus type 1 (HIV-1),  
162
- Frank-Starling relationship  
and heart failure, 66, 67
- Friedewald formula  
and cholesterol screening, 181
- G
- Gallbladder stones  
and endoscopes, 221  
and endoscopic treatment,  
215-16
- Gallstone treatment, 401-12  
eligibility criteria, 402-5  
and extracorporeal shock  
wave lithotripsy (ESL),  
401, 402, 403, 405,  
407-8, 410  
and gallstone recurrence, 401,  
410  
and invasive litholysis with  
organic solvents (ILOS),  
402, 403, 405, 409-10,  
411  
nonsurgical therapy, 410-11  
therapy with oral bile acids,  
405-7
- Gamma aminobutyric acid  
(GABA), 155  
and aggressive behavior, 149  
in animals, 150  
in humans, 153
- Gastroenteritis  
and child day care centers,  
385, 388
- Gastrointestinal absorption  
and diuretic resistance, 68, 69

Gastrointestinal autonomic neuropathy, 308  
 Gastrointestinal diseases and protein digestion, 134  
 Gastrointestinal effects of caffeine, 281, 282  
 Gastrointestinal illness and Guillain-Barré syndrome (GBS), 1  
 Gastrointestinal tract and AIDS, 340-41  
 Gemfibrozil and coronary disease, 473 and hypercholesterolemia treatment, 178-79 for treating hyperlipidemia, 479, 481  
 Genitourinary autonomic neuropathy, 308  
 Gliadins and celiac sprue, 342-43, 344 in gluten, 341  
 Glomerular filtration rate (GFR), 67, 68, 70, 72 and atrial natriuretic factor (ANF), 379 and caffeine, 280-81 and calcium channel blockers, 289, 291-95 and diuretics, 272 and heart failure, 380 and renal perfusion pressure, 423-25 and sodium excretion, 377-78  
 Gluten and celiac sprue, 341, 342, 343  
 Glycoproteins on platelets, 87  
 Glycosylceramidase, 141-42  
 Graft rejection, 361-71  
 Granulocyte colony-stimulating factor (G-CSF), 484, 485, 486, 487, 488-89, 490, 491, 492  
 Granulocyte-macrophage colony-stimulating factor (GM-CSF), 484, 485, 486, 487, 488, 489, 490-92  
 Growth factor(s) platelet-derived, 89, 90 in platelets, 87 and thrombospondin, 89  
 Guillain-Barré syndrome (GBS), 1-5 clinical features, 2-3 diagnostic aids, 3-4 pathogenesis of, 4 therapy for, 4-5  
 Gut peptides, 447-54

## H

Heart disease and caffeine, 282-83 rheumatic in developing nations, 320 see also Coronary disease  
 Heart failure and alterations in afterload, 69-71 and alterations in contractility, 71-73 and alterations in preload, 66-69 congestive, 65-73 and atrial natriuretic factor (ANF), 379-80, 382 and pleural effusions, 10 diagnosis of, 66 pathophysiologic mechanisms in, 66-73  
 Heart rate beat-to-beat (R-R) variation of, 3  
 Heart valves artificial see Artificial heart valves  
 Hematin, 464  
 Hematopoietic growth factors (HGFs), 483-92 molecular biology and structure of, 485 receptors, 485-87, 492 types of, 484-85  
 Heme arginate, 464  
 Heme biosynthesis and lead poisoning, 465 and the porphyrias, 460-63 and porphyrins, 457 steps of, 458-60  
 Heme breakdown and metalloporphyrins, 458, 465-66  
 Heme deficiency and porphyrias, 464  
 Hemolytic anemia(s) and human parvovirus (HPV), 25, 28, 29, 31  
 Hemophilia and desmopressin, 55, 56, 57-58, 62  
 Hemostasis and desmopressin, 55-62  
 Hepatitis, 49  
 Hepatitis A and day care centers, 383, 385, 386, 389  
 Hepatitis B and day care centers, 388-89  
 Hepatoerythropoietic porphyria (HEP), 460, 461, 462  
 Herpes simplex virus (HSV) types 1 and 2, 335, 336

Herpesvirus(es) and cytomegalovirus (CMV), 332-34, 335  
 Epstein-Barr virus (EBV), 334-35  
 herpes simplex virus types 1 and 2, 335, 336  
 human herpesvirus 6 (HHV-6), 335-36  
 immune suppression by, 331-36  
 Varicella-Zoster virus (VZV), 335, 336  
 HIV see Human immunodeficiency virus (HIV)  
 Hormones and acne, 190 and lactase activity, 146 peptide, 447-54 clinical implications of, 452-54 functions of, 449-52  
 Human herpesvirus 6 (HHV-6), 335-36  
 Human immunodeficiency virus (HIV) and day care centers, 389 infection and cytomegalovirus (CMV), 333-34 and Epstein-Barr virus (EBV), 335 and Guillain-Barré syndrome (GBS), 2, 4 and human herpesvirus 6 (HHV-6), 336 type 1 and the central nervous system, 159-65  
 Human parvovirus infection (HPV), 25-31 and aplastic crisis, 25, 26, 28, 29 and arthritis, 25, 26, 30 and bone marrow suppression, 25, 28, 31 and erythema infectiosum, 25, 26, 28-29, 31 and fetopathy, 29 and hemolytic anemia(s), 25, 28, 29, 31 and hydrops fetalis, 25, 26, 29, 31 laboratory diagnosis of, 30-31 prevention and treatment of, 31 and purpuric vasculitis, 25, 26, 30  
 Hydrops fetalis and human parvovirus (HPV), 25, 26, 29, 31

- Hydroxymethyl glutaryl CoA (HMG CoA), 471, 475, 479
- Hyperbilirubinemia and Sn-protoporphyrin treatment, 458, 465-66
- Hypercalcemia in malignancy, 35-41 and parathyroid hormone-like protein (PLP), 37-39
- Hypercholesterolemia and coronary atherosclerosis, 472 recommendations for treatment of, 476 screening for, 177-85 and triglycerides, 475-76
- Hyperglycemia, 305 and diabetic neuropathy, 303, 310
- Hyperlipidemia, 471-81 and diet, 477 drugs for treating, 471, 477-81 familial combined, 476, 478
- Hyperlipoproteinemia multiple type, 476 secondary, 471 three types of, 475
- Hyperlucencies of human immunodeficiency virus type 1 (HIV-1) patients, 162
- Hyperparathyroidism, 36, 39
- Hyperplasia of heart muscle, 75
- Hypertension arterial and coronary atherosclerosis, 472 and atrial natriuretic factor (ANF), 380-81, 382 renovascular, 423, 424 and serum cholesterol, 179
- Hypertriglyceridemia, 479 and coronary risk, 472-73 decision to treat, 476-77 and diet, 477 and pancreatitis, 472, 474 predominant, 475
- Hypertrophic cardiomyopathy (HCM), 75-82 medical treatment for, 76-81 surgical treatment of, 81-82
- Hypertrophic obstructive cardiomyopathy (HOCM), 75, 76
- Hypertrophy myocardial, 69
- Hypochlorhydria and intestinal malabsorption, 345-46
- Hyponatremia, 70, 71
- Hypophosphatemia and parathyroid hormone-like protein (PLP), 38
- Hypoxemia and oxygen therapy, 223-28 sleep, 223, 226, 227-28
- I
- Immune mechanisms humoral, 46
- Immune responses and celiac sprue, 342-43, 344 and sun exposure, 204-5
- Immune suppression by herpesviruses, 331-36
- Immune system and diabetes, 500
- Immunity cellular, 45-46
- Infants and maternal cocaine abuse, 420
- Infections and child day care, 383-90 opportunistic in AIDS, 161, 162, 163 and the intestine, 394, 397
- Inflammation and the effectiveness of rHuEpo, 349, 356-57
- Influenza vaccinations and Guillain-Barré syndrome (GBS), 2
- Infrared radiation, 199
- Insulin antibodies against, 502
- Insulin autoantibodies (IAA) and diabetes prediction, 502-3, 505
- Insulin binding and receptor defects, 107-9
- Insulin deficiency and diabetic neuropathy, 303, 304, 310
- Insulin receptor, 99-111 clinical syndromes associated with defects in, 99, 105-10 internalization of, 105 molecular biology of, 100-103 and signal transduction, 99, 103-5, 109-10 structure, 100
- Insulin resistance disorders associated with, 99, 105-10 and receptor mutation, 102
- Insulin secretion diminished first-phase, 502
- Insulinitis, 498, 499, 501, 504
- Interleukin-1 (IL-1), 484, 485, 486, 487, 488, 489, 501 and sun exposure, 200 and hypercalcemia, 40
- Interleukin-2 (IL-2), 486 and cytolytic lymphocytes, 47 and lymphocytes, 46 and perforin, 48
- Interleukin 3 (IL-3), 484, 485, 486, 487, 488, 489, 490, 492
- Interleukin-4 (IL-4), 484, 485, 489
- Interleukin-5 (IL-5), 484
- Interleukin-6 (IL-6), 484, 485, 486, 487, 488, 489
- Intermittent positive pressure breathing (IPPB) and chronic obstructive pulmonary disease, 224
- Intestinal barriers to bacteria, 393-99
- Intestinal histology and lactose breath hydrogen values, 143-44
- Intestinal malabsorption, 339-46 and AIDS, 339, 340-41 and celiac sprue, 339, 341-44 in the elderly, 344, 345-46
- Intestine bacterial overgrowth of the small, 339, 344-45 lactase activity in the small, 146 small intestinal phase of protein digestion, 135-36, 138
- Intravenous glucose tolerance test (IVGTT), 502
- Intravenous pyelography (IVP), 425, 426
- Invasive litholysis with organic solvents (ILOS) and gallstone treatment, 402, 403, 405, 409-10, 411
- Iron and rHuEpo, 349, 353-54, 356, 358
- Ischemic ventricular arrhythmias, 231-37
- Islet cell antibodies (ICA) and diabetes prediction, 502-3, 505
- Isosorbide dinitrate, 69
- Isotretinoin for the treatment of acne, 194, 196-97
- J
- Juvenile Diabetes Foundation (JDF), 502

**K**

- Kaposi's sarcoma
  - and AIDS, 340-41
- Kidney(s)
  - and calcium channel blockers, 291-95
  - and decreased cardiac output, 67
  - and diuretics, 265-73
  - and parathyroid hormone (PTH) and parathyroid hormone-like protein (PLP), 36, 37

**L**

- Laboratory measurements
  - for hypercholesterolemia, 180-81, 185
- Lactase ( $\beta$ -D-galactoside galactohydrolase), 141
- Lactase deficiency, 142, 143, 144, 145
- Lactase-pherolizin hydrolase (LPH), 141
  - cellular and molecular biology of, 146-47
  - development of, 144-45
  - distribution, 146
  - genetics of, 145
- Lactose absorption test, 142, 143
- Lactose breath hydrogen test, 142, 143-44
- Lactose intolerance, 141-47
  - diagnosis of, 143-44
  - treatment of, 144
- Lactose malabsorption, 142
  - diagnosis of, 143
- Langerhans cells
  - and sun exposure, 205
- La Place relationship, 69
- Large granular lymphocyte (LGL), 49
- Lead poisoning
  - and porphyrin metabolism, 464-65
- Leprechaunism, 99, 106, 108, 109
- Leukocytes
  - and Guillain-Barré syndrome (GBS), 4
- Light delivery
  - in photodynamic therapy, 467
- Lipid Research Clinics Reference methods
  - and cholesterol screening, 180
- Lipopolysaccharide (LPS), 17
  - gram-negative, 398

**Lipoproteins**

- and atherosclerotic disease, 471, 472-73
- and coronary heart disease, 471, 472-74
- and diet, 477
- metabolism and disorders of lipid transport, 474-76
- receptors on certain tumors, 466

**Lithotripsy**

- and bile duct stones, 212, 213
- laser, 221
- shockwave, 216
- see also Extracorporeal shock-wave lithotripsy (ESL)

**Liver cirrhosis**

- and desmopressin, 55, 59

**Liver disease**

- and caffeine metabolism, 278
- and desmopressin, 62

**Liver failure**

- and plasma thrombospondin, 92

**Liver transaminase**, 478, 480

**Loop of Henle**

- and diuretics, 266, 268-69, 272

**Lovastatin**

- and hypercholesterolemia treatment, 179
- for treating hyperlipidemia, 479-80, 481

**Lupus erythematosus**, 204, 207

**Lymph nodes**

- and breast cancer, 118-19

**Lymphatics**

- and breast cancer, 118
- and pleural effusions, 7, 9-10, 11

**Lymphocytes**, 45-51

**B**

- and Epstein-Barr virus (EBV), 334, 335
- and herpes simplex virus (HSV) infection, 335

**T**

- and cytomegalovirus (CMV) immunosuppression, 332
  - and hematopoietic growth factors (HGFs), 484, 487-88
  - and human herpesvirus 6 (HHV-6), 336
  - and Varicella-Zoster virus (VZV) infection, 335
  - and Type 1 diabetes, 498, 500-501
- Lymphocytic choriomeningitis virus (LCMV)**, 49

**Lymphokine-activated killer (LAK) cells**, 48-49

**Lymphokines**, 501

- and allograft rejection, 362, 364, 365, 366, 368, 370
- and hypercalcemia, 40
- and thrombospondin, 86

**Lymphoma(s)**

- and hematopoietic growth factors (HGFs), 491-92
- and hypercalcemia, 35, 40
- and NcAMP, 36
- non-Hodgkin's, 340-41

**Lymphotoxin**, 50

- and hypercalcemia, 40

**Lysosomal acid  $\beta$ -galactosidase**, 142

**M**

**M cells**

- and pathogens, 396-97

**Macrophage colony-stimulating factor (M-CSF)**, 484, 485, 486, 487, 488, 489, 490

**Macrophages**

- and AIDS, 45

**Magnesium**

- depletion of, 68

**Magnetic resonance imaging (MRI)**

- and human immunodeficiency virus type 1 (HIV-1), 162

**Major histocompatibility complex (MHC)**, 46

- and allograft rejection, 361-66, 367, 368, 370

**antigens**

- and diabetes, 499-500
- and Type 1 diabetes, 498

**Malaria**

- and thrombospondin, 93

**Malignancies**

- and thrombospondin, 91

**Malignancy**

- and hypercalcemia, 35-41

**Maltase-glucoamylase**, 142

**Mammography screening**

- for breast cancer, 117-29
- organization and quality assurance of, 128-29

- proof of benefit, 120-23

- screening process, 123-28

**Mastectomy**, 127-28

**Medical Research Council (MRC)**

- oxygen therapy trials sponsored by, 224-25, 226, 227

**Megakaryocyte CFU (Meg)**, 489

- Melanomas  
and sun exposure, 203, 205-6  
see also Cancer; Skin cancer(s)
- Membrane inhibitor of reactive lysis (MIRL)  
and paroxysmal nocturnal hemoglobinuria (PNH), 433, 435
- Memory  
and human immunodeficiency virus type 1 (HIV-1), 162
- Mental slowing  
and human immunodeficiency virus type 1 (HIV-1), 162
- Mesenteric lymph nodes (MLN), 395, 396, 397
- Metalloporphyrins  
to inhibit heme breakdown, 458, 465-66
- Methyl *tert*-butyl ether (MTBE)  
and gallstone treatment, 401, 409-10, 411
- Microbial contamination  
of central venous lines, 170-72
- Military camps  
and acute rheumatic fever (ARF), 323-25
- Military installations  
and streptococcal disease, 326
- Milk  
lactose in, 141
- Milk intolerance, 142
- Miller Fisher syndrome, 3
- Mononucleosis  
and cytomegalovirus (CMV), 332, 333, 334  
Epstein-Barr virus (EBV), 334
- Morbidity  
psychiatric  
and human immunodeficiency virus type 1 (HIV-1), 162-63
- Mucus  
and antibodies, 395  
in the intestine, 393, 394-95  
radiation effects on, 395
- Multi-colony-stimulating factor (multi-CSF), 485
- Myeloma  
and hypercalcemia, 35, 40  
and NcAMP, 36  
and parathyroid hormone-like protein (PLP), 38
- Myocardial infarction  
and plasma thrombospondin, 92
- Myocarditis, 49
- N
- Nasal prongs  
and oxygen therapy, 223, 228
- National Cholesterol Education Program (NCEP), 178, 179, 180-81, 183
- National Institutes of Health (NIH)  
oxygen therapy trials sponsored by, 224-25, 226, 227
- Natural killer (NK) cells, 46-50  
and diabetes, 500-1  
and cytomegalovirus (CMV), 332, 333  
and hematopoietic growth factors (HGFs), 487
- Nephrogenous cyclic AMP (NcAMP)  
and hypercalcemia, 36, 38, 40
- Nephrotic syndrome  
and atrial natriuretic factor (ANF), 381, 382
- Neuroanatomy  
and human immunodeficiency virus type 1 (HIV-1), 162
- Neuroarthropathy  
diabetic, 308
- Neurological dysfunction  
in the porphyrias, 457, 458, 461, 463-64
- Neurology  
of cocaine, 417-21
- Neuropathy  
diabetic, 303-15
- Niacin  
and coronary disease, 473, 474  
for treating hyperlipidemia, 478-79, 480, 481
- Nicotinamide  
as therapy in diabetes, 504
- Nicotinic acid  
and hypercholesterolemia treatment, 178-79
- Nifedipine  
effects and properties of, 290, 291-93, 294, 295, 296  
in hypertrophic cardiomyopathy (HCM) therapy, 77, 80-81
- Nitrate therapy  
in congestive heart failure (CHF), 69
- Nonobese diabetic (NOD) mice  
and diabetes mellitus, 49  
and Type 1 diabetes, 498-500, 501, 502, 504
- Norepinephrine, 70, 72, 155  
and aggressive behavior, 149  
in animals, 151-52  
in humans, 154  
and cocaine, 418
- O
- Oat bran, 185
- Obsessive-compulsive disorder (OCD)  
and serotonin-specific drugs, 440, 442, 443
- Oligopeptides  
and protein digestion, 134, 135, 136
- Oncogenes  
and thrombospondin, 86
- Oral contraceptive drugs (OCs)  
see Contraceptive drugs
- Organ allografts  
rejection of, 361-71
- Organ transplant recipients  
cytomegalovirus (CMV)-infected, 333  
and Epstein-Barr virus (EBV) infection, 334-35  
and herpes simplex virus (HSV) infections, 335  
and herpesviruses, 331
- Osmotic lysis model  
for cell killing, 47-48
- Oxygen therapy, 223-29  
oxygen supply systems, 223, 229  
selection criteria for candidates for, 227
- P
- Pacemaker(s)  
antitachycardia, 240, 243  
and atrial fibrillation (AF), 248  
ventricular, 247
- Pancreas  
endocrine neoplasms of the, 452-53
- Pancreatic proteases, 136
- Pancreatitis  
and hypertriglyceridemia, 472, 474
- Para-aminobenzoic acid (PABA), 207
- Paralysis  
and Guillain-Barré syndrome (GBS), 1
- Parathyroid hormone (PTH), 35  
and parathyroid hormone-like protein (PLP), 36-37
- Parathyroid hormone-like protein (PLP)

- and hypercalcemia, 36-39
- Parenchymal disease
  - and renal revascularization, 425, 426
- Paroxysmal nocturnal hemoglobinuria (PNH)
  - and decay-accelerating factor (DAF), 431-35
- Parvovirus infections
  - see Human parvovirus infections (HPV)
- Penicillin
  - and acute rheumatic fever (ARF), 321, 323, 324, 326
- Peptic ulcer patients
  - serum gastrin in, 453
- Peptidases,
  - and protein digestion, 134-36, 137, 138
- Peptide(s)
  - atrial natriuretic factor (ANF), 377-82
  - gluten, 343
  - and hypercalcemia in malignancy, 35-41
  - and intestinal injury, 341
  - intestinal transport of, 136-37
  - and protein digestion, 133
  - toxic to intestinal mucosa, 342
- Peptidic agents
  - and human immunodeficiency virus type 1 (HIV-1), 164
- Percutaneous transluminal angioplasty (PCTA), 424, 425, 426-27
- Perforin
  - for cell killing, 47-48
  - distribution and biological role of, 48-49
  - and lymphocytes, 51
- Peyer's patches, 393, 396-97, 398
- Phlorizin hydrolase (phlorizin glucosylhydrolase), 141
- Phosphaturia
  - and parathyroid hormone-like protein (PLP), 38
- Phosphodiesterase inhibitors, 73
- Phosphorylation
  - and insulin receptor kinase, 104
- Photaging
  - and sun exposure, 206, 207
- Photoallergy, 201, 207
- Photocutaneous lesions
  - in the porphyrias, 457, 458, 461
- Photocutaneous symptoms
  - in the porphyrias, 463
- Photodynamic therapy (PDT)
  - for cancer, 466-67
- Photoprotection, 206-8
- Photosensitivity, 201-4
  - and metalloporphyrins, 466
  - and the porphyrias, 463
  - in protoporphyria, 464
- Phototoxic reactions, 201, 202, 207
- Plasma membrane lesions
  - and lymphocytes, 47
- Plasmapheresis
  - and Guillain-Barré syndrome (GBS), 5
- Platelet dysfunction(s)
  - acquired, 60
  - and desmopressin, 55, 59, 62
- Platelets
  - and thrombospondin, 85, 87, 89, 91
- Pleural effusions, 7-11
- Poliovirus
  - and child day care centers, 387-88
- Polymorphous light eruption, 203-4, 207
- Pore-forming protein (PFP), 47
- Porphyria, 457-67
- Porphyria cutanea tarda (PCT), 460, 461, 462, 463, 464, 465
- Porphyrias, 201, 202, 207
  - biochemical pathogenesis of, 460-63
  - clinical manifestations in the, 463-64
- Porphyrin(s)
  - metabolism, 464-65
  - therapeutic uses of, 465-67
- Porphyrinogens, 457
- Porphyria
  - secondary, 464
- Potassium
  - and aldosterone, 67
  - depletion of, 68
  - and digoxin therapy, 72
  - and diuretics, 273
  - and ischemic depolarization, 234
  - and the loop of Henle, 268-69, 272
  - and the sodium channel, 270, 271
- Potassium ions
  - and ventricular arrhythmias, 232-34
- Prednisone
  - as therapy in diabetes, 503
- Pregnancy
  - and caffeine, 283
  - and cocaine, 420
- and human parvovirus (HPV), 29
- Preload
  - and angiotensin-converting-enzyme (ACE) inhibitor therapy, 70, 71
  - and heart failure, 66-69
- Prerenal azotemia, 67
- Probucol
  - and atherosclerosis, 480
- Prolamins
  - amino acids in, 341
- Propionibacterium acnes*, 187, 189, 190-91, 193, 194
- Propranolol
  - in hypertrophic cardiomyopathy (HCM) therapy, 76, 77, 80-81
- Proteases
  - in cytotoxic T lymphocytes (CTLs) and natural killer (NK) cells, 49-50
- Protein(s)
  - assimilation in health and disease, 137-38
  - concentration in pleural space, 8, 9
  - exogenous and endogenous, 134
  - formation and visceral pleura, 8-9
  - membrane
    - and paroxysmal nocturnal hemoglobinuria (PNH), 433-34
    - and paroxysmal nocturnal hemoglobinuria (PNH), 431, 435
  - synthesis and sun exposure, 200
- Protein C-protein S pathway
  - and endothelium, 19, 20-21, 22
- Protein digestion, 133-38
  - intraluminal phase of, 134-35
  - pancreatic phase of, 134-35, 138
  - small intestinal phase of, 135-36, 138
  - transport and absorption of, 136-37
- Protoporphyria, 461, 463
- Proximal tubule
  - and diuretics, 266-68, 271
- Psychiatric disturbances
  - and caffeine, 283-84
- Psychotropic medication
  - and human immunodeficiency virus type 1 (HIV-1), 164

- Pulmonary circulation  
and visceral pleural thickness, 8
- Pulmonary edema, 67
- Purpura  
and human parvovirus (HPV), 25, 26, 30
- Pyruvate kinase deficiency, 28
- R**
- Rabson-Mendenhall syndrome, 99-100, 106
- Radiation  
effects on mucus, 395  
and the intestine, 398  
in mammography and xeromammography, 120
- Radiation therapy  
and breast cancer, 127, 129
- Radioimmunoassay  
and peptide hormones, 447-48
- Radionuclide scanning, 425
- Rashes  
and human parvovirus (HPV), 28, 29, 30
- Renal arteriography, 426
- Renal artery stenosis (RAS), 71, 423-28
- Renal blood flow (RBF)  
and calcium channel blockers, 289, 291-93  
and diuretics, 271
- Renal carcinomas  
and increased NcAMP, 36
- Renal disease  
and caffeine, 284  
chronic  
and porphyria cutanea tarda, 465  
and desmopressin, 62  
and erythropoietin, 492
- Renal failure  
acute  
and calcium channel blockers, 295-97, 299  
chronic  
and anemia, 349-50  
and atrial natriuretic factor (ANF), 381  
and calcium channel blockers, 298-99  
effect of correcting anemia in, 354-56  
and erythropoietin, 349-50  
and plasma thrombospondin, 92
- Renal function  
and calcium channel blockers, 289-99
- Renal insufficiency  
with angiotensin-converting-enzyme (ACE) inhibitor therapy, 71
- Renal perfusion pressure  
and glomerular filtration rate (GFR), 423-25
- Renal revascularization, 423-28  
candidates for, 425-26  
and percutaneous transluminal angioplasty (PCTA), 426-27
- Renal transplantation  
and calcium channel blockers, 289, 297-98, 299
- Renal tubular calcium  
and hypercalcemia, 39-40
- Renin  
and atrial natriuretic factor (ANF), 380-81  
and calcium channel blockers, 295  
and decreased cardiac output, 66, 67  
and diuretics, 68  
and heart failure, 69-70
- Renin assay  
peripheral, 425
- Renography  
captopril, 425
- Reproductive disturbances  
and caffeine, 283
- Respiratory effects  
of caffeine, 281
- Respiratory function  
and Guillain-Barré syndrome (GBS), 4
- Respiratory illness  
and day care centers, 385, 388  
and Guillain-Barré syndrome (GBS), 1
- Respiratory muscle weakness  
and Guillain-Barré syndrome (GBS), 2
- Restriction fragment length polymorphisms (RFLP)  
and diabetogenic major histocompatibility complex (MHC) genes, 498
- Reticulocytopenia  
and human parvovirus (HPV), 28
- Revascularization  
and renal function, 423-28
- Rheumatic fever  
see Acute rheumatic fever (ARF)
- Rheumatoid arthritis  
and perforin, 49
- RHuEpo  
influence of inflammation on, 349, 356-57
- and internal iron metabolism, 353-54
- therapy, 350-53, 358  
and blood pressure, 349, 354-56, 358
- RNA**  
and hematopoietic growth factors (HGFs), 485, 487  
insulin receptor, 108  
of parathyroid hormone-like protein (PLP), 36-37  
and peptide hormones, 449  
and sun exposure, 200
- thrombospondin, 86, 89
- Rubella infection  
and diabetes, 500
- S**
- Sebum  
and acne, 191-93
- Seizures  
and cocaine, 417, 419, 420, 421
- Sensory loss  
and Guillain-Barré syndrome (GBS), 2
- Septic shock  
and endothelium, 17, 21
- Serotonin, 155
- 5-HT<sub>1A</sub> receptor agonists, 440-41, 444
- 5-HT<sub>2</sub> receptor antagonists, 441, 444
- 5-HT<sub>2</sub> antagonists, 441  
and aggressive behavior, 149  
in animals, 152  
in humans, 154-55  
and cocaine, 418  
receptor subtypes, 438-40, 444  
reuptake inhibitors, 441-43, 444
- Shigellosis  
and day care centers, 383, 386, 389
- Shockwaves  
see Extracorporeal shockwave lithotripsy (ESL)
- Sickle cell anemia, 28
- Signal transduction  
defects in, 109-10  
and insulin receptor, 99, 103-5
- Silica, 501
- Skin cancer(s)  
and sun exposure, 205-6, 207  
and UVR, 203
- Sleep  
and caffeine, 280
- Sleep apnea syndrome, 228
- Sleep hypoxemia, 223, 226, 227-28

- Smokers  
and caffeine metabolism, 278  
and oxygen therapy, 227
- Smoking  
and coronary atherosclerosis, 472  
and photoaging, 206  
and serum cholesterol, 179
- Socio-economic status  
and acute rheumatic fever (ARF), 320-21
- Sodium  
and atrial natriuretic peptide, 70  
and digoxin therapy, 72  
and diuretics, 68
- Sodium-calcium exchange  
electrogenic, 234, 235
- Sodium channel  
and diuretics, 272-73  
and sodium reabsorption, 270-71
- Sodium diet  
and fluid retention, 68
- Sodium excretion  
and atrial natriuretic factor (ANF), 379, 382  
by the kidney, 377-78
- Sodium potassium ATPase  
basolateral, 265, 266, 268, 270  
and ischemia, 232-33
- Sodium reabsorption, 377-78  
and diuretics, 265-73
- Sodium retention  
and atrial natriuretic factor (ANF), 380, 381  
and congestive heart failure (CHF), 67  
and heart failure, 380
- Spherocytosis, 28
- Sphincterotomy  
and bile duct stones, 211  
complications, 212, 214  
described, 212  
indications for, 214-15  
for obstructing tumors of the papilla, 216  
and papillary stenosis, 211, 221
- Spinal fusion surgery  
and desmopressin, 60, 62
- Staphylococci  
and central venous lines (CVLs), 170
- Stenting  
and biliary strictures and leaks, 220-21  
endoscopic, 211  
endoscopic biliary, 216-20
- Steroids  
and Guillain-Barré syndrome (GBS), 5  
for the treatment of acne, 196
- Stomata  
in parietal pleura, 7, 9, 11
- Streptococcal pharyngitis  
and acute rheumatic fever (ARF), 322, 323, 325, 326
- Streptococcal strains  
and acute rheumatic fever (ARF), 324
- Streptococci  
group A  
and acute rheumatic fever (ARF), 321-22, 325, 326, 327
- Stress  
and acne, 193
- Stroke  
associated with cocaine, 417, 419-20, 421
- Sucrase-isomaltase, 142
- Sun exposure  
and acne, 193  
acute adverse effects of, 200-5  
chronic adverse effects of, 205-6
- Sun protection factor (SPF), 207-8
- Sunburn, 200-1, 207  
and melanoma, 206
- Sunlight  
characteristics of, 199-200
- Sunscreens, 207-8
- Supraventricular tachycardia (SVT), 239-48
- "Swine flu" vaccine  
and Guillain-Barré syndrome (GBS), 2
- T**
- T cell receptor  $\beta$  chain  
and Type 1 diabetes, 498-99
- T cell surface receptor (TCR)  
and allograft rejection, 364-65, 368, 369
- T cells  
and allograft rejection, 361, 362, 363-66, 367-69, 370  
and diabetes, 501  
and hematopoietic growth factors (HGFs), 485
- Thalassemia, 28
- Thallium stress testing  
and heart failure, 66
- Thrombin  
and endothelium, 22  
and paroxysmal nocturnal hemoglobinuria platelets, 433  
and protein C-protein S pathway, 20
- Thrombocytopenia, 59, 60
- Thromboembolism  
and artificial heart valves, 253, 254-55, 256
- Thrombomodulin  
and protein C-protein S pathway, 20-21
- Thrombosis  
and artificial heart valves, 253, 255-56  
venous  
and paroxysmal nocturnal hemoglobinuria (PNH), 431, 432-33
- Thrombospondin, 85-93  
and falciparum malaria, 93  
functions of, 87-91  
metabolism of, 90  
in plasma and serum, 91-92  
structure of, 86-87  
in tissues, 92
- Toxic-shock-like syndrome  
due to group A streptococcus, 325
- Toxoplasmosis, 161
- Tranexamic acid, 56
- Transforming growth factor- $\alpha$  (TGF- $\alpha$ )  
and hypercalcemia, 40
- Translocation  
of bacteria, 393, 395-96
- Triglyceride(s)  
and coronary disease, 472-73  
increases in serum, 476  
in lipoprotein metabolism, 474-75  
measurement of, 475  
and pancreatitis, 474
- Trypsin  
and protein digestion, 135
- Tuberculosis  
and day care center personnel, 389
- Tumor cells  
and thrombospondin, 92
- Tumor necrosis factor (TNF), 50, 501  
and endothelium, 20, 21, 22-23  
and endothelium permeability, 17-19  
and hematopoietic growth factors (HGFs), 487, 488
- Tumor necrosis factor- $\alpha$  (TNF- $\alpha$ )  
and hypercalcemia, 35, 40
- Tumors  
porphyrins in malignant, 466  
and tumor necrosis factor (TNF), 22-23

- Type A insulin resistance, 99, 106, 107, 108, 109-10
- Typhoid fever  
and day care center personnel, 389
- Tyrosine kinase activity  
and insulin receptor, 103-5  
and insulin resistance, 109-10
- Tyrosinemia  
and porphyrias, 465
- U
- Ultrasonography  
and mammographic abnormality, 125-26  
of the renal arteries, 425
- Ultraviolet radiation (UVR)  
defined, 199-200  
and DNA mutations, 205  
and immune responses, 204-5  
and skin cancers, 203  
see also UVA; UVB
- Uremia  
and desmopressin, 55, 58-59
- Ursodiol  
and gallstone treatment, 406-7
- UVA  
defined, 200  
and photoaging, 206  
and photoprotection, 207-8  
and photosensitivity, 201  
and skin cancer, 205  
and sunburn, 200-1  
see also Ultraviolet radiation (UVR)
- UVB  
defined, 200  
and immune responses, 204-5  
and photoaging, 206  
and photoprotection, 207-8  
and skin cancer, 205  
and sunburn, 200-1  
see also Ultraviolet radiation (UVR)
- V
- Vaccinations  
and Guillain-Barré syndrome (GBS), 2
- Vaccines  
for acute rheumatic fever (ARF), 327
- Varicella  
and child day care centers, 383, 385, 387
- Varicella-Zoster virus (VZV), 335, 336
- Vascular lesions  
and endothelium, 16, 22
- Vasoconstriction  
and alpha receptors, 73  
and desmopressin, 56  
and heart failure, 70
- Vasodilation  
and phosphodiesterase inhibitors, 73
- Vasodilator therapy  
in congestive heart failure (CHF), 70-71
- Vasopressin  
and desmopressin, 56
- Venoconstriction  
and nitrate therapy, 69  
sympathetic-mediated, 67
- Venous catheter infection  
see Catheter infection
- Venous pressure  
and pleural fluid, 10
- Ventricle  
failing, 67
- Ventricular filling  
and hypertrophic cardiomyopathy (HCM), 75, 76, 77
- Ventricular filling pressure  
assessing, 68
- Ventricular function  
assessing, 66  
and hypertrophic cardiomyopathy (HCM), 75-80  
right  
and chronic obstructive pulmonary disease, 226
- Ventricular pressure, 69
- Ventricular wall thickness, 69
- Verapamil  
effects and properties of, 290, 291-93, 295, 296, 297, 298-99  
in hypertrophic cardiomyopathy (HCM) therapy, 76-77, 80, 82  
and ischemic arrhythmias, 237
- Vitamin B<sub>12</sub> deficiency  
and intestinal malabsorption, 345
- Vitamin D 1,25(OH)<sub>2</sub>  
and parathyroid hormone-like protein (PLP) and parathyroid hormone (PTH), 39
- Vitamin D metabolite 1,25(OH)<sub>2</sub>  
and parathyroid hormone-like protein (PLP), 37
- Von Willebrand's disease  
and desmopressin, 55, 56, 57-58, 62
- Von Willebrand's factor (vWF), 55, 56, 57, 58, 61  
in liver cirrhosis, 59
- W
- Water excretion  
and atrial natriuretic factor (ANF), 378, 379, 382  
and diuretics, 265-66
- Water retention  
and atrial natriuretic factor (ANF), 380, 381  
and congestive heart failure (CHF), 67  
and desmopressin, 60
- Wolff-Parkinson-White (WPW) syndrome, 240-44  
pharmacologic treatment of, 243
- World Health Organization (WHO)  
and cholesterol screening, 178, 179, 180, 185
- Wounds  
and thrombospondin, 87-89
- X
- Xeroderma pigmentosum, 201, 203
- Z
- Zymogens  
and protein digestion, 134

